

**AMENDMENTS TO THE CLAIMS**

1. - 12 (Canceled)

13. (Currently Amended) A system for processing radio frequency (RF) signals comprising:

an input to said circuit for receiving an RF signal;

a mixer having an input connected to said RF signal input;

a first filter having an input connected to an output of said mixer, wherein said first filter is a low-pass filter;

a first amplifier having an input connected to an output of said first filter, wherein said first amplifier operates to amplify an output signal from said first filter to a maximum level acceptable as an input to said second filter to avoid distortion of said RF signal;

a second filter having an input connected to an output of said first amplifier; and

a second amplifier having an input connected to an output of said second filter, and an output connected to an output of said circuit;

wherein said mixer, said first and second filters and said first and second amplifiers are constructed on a single integrated circuit substrate.

14. (Canceled)

15. (Previously Presented) The system as claimed in claim 13, wherein said first amplifier means is a variable gain amplifier (VGA).

16. (Original) The system as claimed in claim 13, wherein said second filter means is an intermediate frequency, band-pass filter.

17. (Previously Presented) The system as claimed in claim 13, wherein said second amplifier means is a fixed gain amplifier (FGA).

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18. (Previously Presented) A method of processing radio frequency (RF) signals, the method comprising the steps of:

receiving an input RF signal;

mixing said input RF signal with an operating frequency signal to generate a first signal;

filtering said first signal to generate a second signal, wherein said filtering said first signal includes processing said first signal through a low-pass filter;

amplifying to a fixed level said second signal to generate a third signal, wherein said amplifying said second signal to generate a third signal includes amplifying said second signal by a variable gain amplifier (VGA), the limit of said VGA being the maximum level acceptable by said third signal filtering step without distortion;

filtering said third signal to generate a fourth signal; and

amplifying said fourth signal a fixed amount to generate a fifth signal;

wherein said mixing, filtering and amplifying steps are performed on a single integrated circuit substrate.

19. (Canceled)

20. (Previously Presented) A method for processing RF signals as recited in claim 18, wherein the step of filtering said third signal to generate a fourth signal includes processing said third signal through an intermediate-frequency, band-pass filter.

21. (Previously Presented) A method of processing RF signals as recited in claim 20, wherein said step of amplifying said fourth signal to generate a fifth signal includes amplifying said fourth signal by a fixed gain amplifier (FGA).

22. (Canceled)

23. (Currently Amended) The circuit of claim ~~[[22]]~~ 13 wherein said RF signal is a video signal.

24. (Previously Presented) The method of claim 18 wherein said amplifying to a fixed level step amplifies said second signal to a specific level that is a maximum level acceptable as an input to a filter to avoid distortion of said RF signal.

25. (Previously Presented) The method of claim 24 wherein said RF signal is a video signal.

26. (Previously Presented) A radio frequency (RF) signal processing circuit comprising:

- a mixer coupled to an RF signal input;

- a variable gain amplifier coupled to said mixer, wherein said variable gain amplifier amplifies IF signals received from said mixer to a particular signal level, said particular signal level corresponding to the maximum signal level that can be accepted by a filter without distorting said RF signal;

- said filter coupled to an output of said variable gain amplifier and operable to pass frequencies in a selected IF band, while simultaneously attenuating signals having frequencies outside of said IF band; and

- an amplifier coupled to an output of said filter;

wherein said mixer, said filter, and said amplifiers are physically located on a single integrated circuit substrate.

27. (Previously Presented) The method of processing an RF signal comprising the steps of:

- inputting said RF signal to a mixer;

- mixing said RF signal to create an intermediate frequency (IF) signal;

- filtering said IF signal to remove high frequency signals, thereby creating a first filtered IF signal;

- amplifying said first filtered IF signal to a selected signal level, thereby generating an amplified, first filtered IF signal, said selected signal level corresponding to the maximum level acceptable as an input to a band-pass filter to avoid distortion of said signal;

- filtering said amplified, first filtered IF signal in said band-pass filter, wherein said band-pass filter attenuates signals having frequencies above and below an IF frequency band, thereby generating a second filtered IF signal; and

- amplifying said second filtered IF signal;

wherein said mixing step, said filtering steps, and said amplifying steps are conducted in circuits that are physically located on a single integrated circuit substrate.